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Announcement of the

College of Architecture

1928-29

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THE UNIVERSITY CALENDAR FOR 1928–29

Observed by all the departments of the University at Ithaca.

FIRST TERM

1928		
Sept. 14, *Friday*,	Entrance examinations begin.	
Sept. 24, *Monday*,	Registration and assignment of new students.	
Sept. 25, *Tuesday*,		
Sept. 25, *Tuesday*,	Registration and assignment of old students.	
Sept. 26, *Wednesday*,		
Sept. 27, *Thursday*,	Instruction begins at 8 A. M.	
Oct. 19, *Friday*,	Last day for payment of tuition for the first term.	
Nov. 28, *Wednesday*,	Instruction ends at 6 P. M.	Thanksgiving Recess
Dec. 3, *Monday*,	Instruction resumed at 8 A. M.	
Dec. 22, *Saturday*,	Instruction ends at 1 P. M.	Christmas Recess
1929		
Jan. 7, *Monday*,	Instruction resumed at 8 A. M.	
Jan. 11, *Friday*,	Founder's Day.	
Jan. 26, *Saturday*,	Instruction ends.	
Jan. 28, *Monday*,	Term examinations begin.	
Feb. 6, *Wednesday*,	Term ends.	
Feb. 7, *Thursday*,	A holiday.	

SECOND TERM

Feb. 8, *Friday*,	Registration of all students.	
Feb. 11, *Monday*,	Instruction begins at 8 A. M.	
Mar. 4, *Monday*,	Last day for payment of tuition for the second term.	
Mar. 30, *Saturday*,	Instruction ends at 1 P. M.	Spring Recess
April 8, *Monday*,	Instruction resumed at 8 A. M.	
May 25, *Saturday*,	Spring Day: a holiday.	
June 3, *Monday*,	Term examinations begin.	
June 11, *Tuesday*,	End of term examinations.	
June 17, *Monday*,	COMMENCEMENT.	

THE COLLEGE OF ARCHITECTURE

THE FACULTY

LIVINGSTON FARRAND, A.B., M.D., L.H.D., LL.D., President of the University.

GEORGE YOUNG, JR., B.Arch., Acting Dean and Professor of Architecture.

CLARENCE AUGUSTINE MARTIN, D.Sc., Professor of Architecture.

OLAF MARTINIUS BRAUNER, Professor of Drawing and Painting.

ALBERT CHARLES PHELPS, B.S., M.Arch., World War Memorial Professor of Architecture.

FRANCKE HUNTINGTON BOSWORTH, A.B., Andrew Dickson White Professor of Architecture.

E. GORTON DAVIS, B.S., Professor of Landscape Architecture.

CHRISTIAN MIDJO, Professor of Freehand Drawing and Modeling.

RALPH WRIGHT CURTIS, M.S.H., Professor of Ornamental Horticulture.

LEROY P. BURNHAM, M.S.Arch., Professor of Design.

WILLIAM H. SCHUCHARDT, B.Arch., Professor of Architecture.

ALEXANDER DUNCAN SEYMOUR, B.S.Arch., Professor of Architecture.

GEORGE RAY CHAMBERLAIN, M.E., Assistant Professor of Freehand Drawing. (Absent on leave.)

EUGENE DAVIS MONTILLON, B.Arch., Assistant Professor of Landscape Architecture.

HUBERT E. BAXTER, B.Arch., Assistant Professor of Architecture.

WALTER KING STONE, Assistant Professor of Drawing. (Absent on leave).

WILLIAM MCLEISH DUNBAR, B.Arch., Assistant Professor of Architecture.

EDWARD LAWSON, B.S., M.L.D., F.A.A.R., Assistant Professor of Landscape Architecture.

DONALD LORD FINLAYSON, M.A., Assistant Professor of Fine Arts.

EDWARD ABBUEHL, Instructor in Graphics.

CONWAY LIBANUS TODD, M.Arch., Instructor in Architecture.

JAMES W. GRIMES, Jr., B.F.A., Instructor in Freehand Drawing.

KENNETH L. WASHBURN, B.F.A., Instructor in Freehand Drawing.

————————, Librarian.

MILDRED E. VANALSTYNE, Secretary to the Dean.

GENERAL STATEMENT

THE COURSES OF STUDY

The College of Architecture is a professional school offering courses of study designed as basic training preparatory to the practice of the profession of

Architecture,
Landscape Architecture,
Painting or Sculpture.

The course leading to the degree of Bachelor of Architecture is intended for the student who expects to practice architecture. In addition to the regular curriculum leading to this degree, a course is available for the student who expects to specialize more particularly in the structural phase of architecture or engage in building or in the manufacture of building materials. The course leading to the degree of Bachelor of Landscape Architecture is intended for the student who expects to practice landscape architecture. The courses in Architecture and Landscape Architecture are practically identical throughout the first two years. The course leading to the degree of Bachelor of Fine Arts is intended for the prospective painter or sculptor or for one who expects to engage in the practice of one of the decorative arts.

The number of students in the college is limited in order to insure, throughout the course, that close personal association between teacher and pupil which is necessary for effective instruction in any creative art. The several curricula are composed largely of courses technical in nature. In these the work is competitive, the standard of scholarship being maintained upon a professional basis. Included in these curricula is such an amount of general academic work, courses taught in other departments of the University, as would seem to furnish the minimum essential cultural background. It is inadvisable for anyone not vitally interested to attempt the work of any of these courses of study.

The course leading to any one of the three degrees granted by the college requires, normally, five years of work. It is possible, however, for a thoroughly prepared student to qualify for a degree in less time. In order to do so, it would be necessary to present for entrance both Advanced Algebra and Trigonometry, as well as both Physics and Chemistry, inasmuch as these subjects, if not presented for entrance, must be taken in the University. Students presenting these subjects for entrance are not required to repeat them. The rate of a student's progress in the college is determined in large part by the quality of his work and not alone by the quantity of it. The amount of work that a student is permitted to carry each term is dependent upon the excellence of his scholastic record, hence the actual time required for the completion of the course will depend upon his ability as indicated by that record. The time element in the preparation for any creative profession is such, however, that crowding of the work is deemed unwise.

BUILDINGS AND EQUIPMENT

The College of Architecture occupies the third and fourth floors and a portion of the basement of White Hall, the top floor of Franklin Hall, and parts of Morse Hall. The college offices, the college library, the lecture room and exhibition rooms occupy the third floor of White Hall. A suite of three drafting rooms, opening together so as to form virtually a single room approximately 45 x 156 feet in dimension, occupies the entire fourth floor. On the top floor of Franklin Hall are well-lighted studios devoted to the work in freehand drawing, painting, and modeling.

The college library is one of the best in the country, and the student is permitted and encouraged to use the books, photographs, and drawings freely.

A carefully selected collection of about 24,000 lantern slides is used constantly in connection with the lectures upon history, theory, and construction.

The College of Architecture also maintains an Art Gallery in Morse Hall, having approximately 230 lineal feet of wall for the temporary exhibition of paintings, etchings and other prints, architectural drawings and photographs and examples of various types of applied art, such as textiles, ceramics, and wrought iron. It is the aim of the college to bring to all students of the university the benefits of contact with the work of eminent artists, architects, and artisans.

In the Exhibition rooms in White Hall are shown current student work in design, painting, and drawing.

ADMISSION TO THE COLLEGE

Admission to the College of Architecture is to be obtained only through the Committee on Admissions of that College.

The requirements and rules of admission will be found in the General Circular of Information.

No application for admission in September will be received after June 1. For admission in February no application will be received after January 1.

ADMISSION TO THE FRESHMAN CLASS

Admission to the freshman class is permitted at the beginning of the first term only.

ADMISSION TO ADVANCED STANDING

A student who has already attended a technical school or other institution of collegiate rank may be admitted at the beginning of the first or, if a satisfactory schedule of work can be arranged, at the beginning of the second term. Such an applicant is required to fulfill all academic and other entrance requirements.

In addition he should file with the Committee on Admissions of the College of Architecture an official transcript of record of his work at

the institution already attended together with a certificate of honorable dismissal therefrom. He should also send to the Committee a catalogue of the institution, writing his name thereon, and marking the courses which he has taken as listed in the official transcript.

Advanced credit for courses in the College of Architecture is given only upon examination by the department concerned but a preliminary ruling will be made by the Committee on Admissions on the evidence submitted.

ADMISSION OF SPECIAL STUDENTS

Special students are primarily those of advanced experience in the practice of their art. They must be at least twenty-one years of age, and must have had a high school training or its equivalent, including a working knowledge of plane geometry and solid geometry and, in the case of architects, of algebra through quadratic equations. They should have at least three years' practical experience or its equivalent and submit with their application examples of their work or draftsmanship. All correspondence concerning admission of special students should be addressed to the Committee on Admissions of the College of Architecture. A special form of questionnaire will be sent to such applicants. Special students may be admitted at the beginning of either term, but applications accompanied by deposit should be filed by June 1, or January 1. See also the General Circular of Information. A high scholastic performance is expected of special students and is made a condition of their remaining enrolled in the college. The college does not issue a certificate for special work.

A SIX-YEAR COURSE LEADING TO THE DEGREES OF BACHELOR OF ARCHITECTURE AND CIVIL ENGINEER

A student may arrange a course of about six years leading to the degrees of Bachelor of Architecture and of Civil Engineer. Such an arrangement must in every instance have the special approval of the College of Architecture and of the School of Civil Engineering.

ADMISSION AS A GRADUATE STUDENT

All correspondence relating to graduate work should be addressed to the Dean of the Graduate School.

In all departments of the College of Architecture work is arranged to meet the special needs of graduate students. Candidates for advanced degrees in architecture or in landscape architecture must be graduates of schools of equal standing with the College of Architecture, and their training in design or other subjects elected for graduate study must be equivalent to the training required in the same subjects by the College of Architecture for the degree of Bachelor of Architecture or for the degree of Bachelor of Landscape Architecture.

TUITION AND OTHER FEES

Information regarding tuition and other fees, and regarding the expenses of living in Ithaca, will be found in the General Circular of Information.

FELLOWSHIPS: SCHOLARSHIPS: PRIZES

For information concerning scholarships that are open to students of this college in common with other students of the University, consult the General Circular of Information.

A University Fellowship of the value of $400 with free tuition is awarded annually for graduate study, by the Faculty of Architecture.

The Beckwith Brown Memorial Medal may be awarded each year to the two members of the graduating class who have made the best record in design in their senior year.

The Sands Memorial Medal may be awarded for special excellence in any individual piece of work in any course in the college.

The Student Medal of the American Institute of Architects is awarded to the member of the graduating class in architecture whose record is the best throughout the entire course.

Through the *Beaux-Arts Institute of Design* numerous prizes are offered for excellence of work in design. These prizes are open to students in the College of Architecture who frequently compete for them with success and distinction to themselves and to the college.

The Fuertes Memorial Prizes in Oratory (first prize $125, second prize $35, and third prize $25) are open to students in Architecture on equal terms with students in engineering.

The Paul Dickinson Prize of $25 is to be awarded to the student in the first year class of the College of Architecture whose general record is best as determined by a vote of the Faculty of the College.

Baird Prizes. Two prizes are offered, one of $30 and one of $20, for the best and next best showing of sketches made during the summer by undergraduates registered in this College.

THE HONOR CODE

By action of the student body and the faculty of the College of Architecture, approved by the University Faculty, all academic work in the college is conducted on the assumption of general honor and good behavior. The presence or absence of members of the faculty at examinations or other academic exercises in no way modifies the obligations of personal honor.

A committee, comprising both faculty and student members, adjudicates cases of alleged dishonesty and disorder in all academic work conducted by the College of Architecture. Those cases which are of administrative concern to more than one College are cared for by action taken by the University Faculty, ensuring the cooperation of the Colleges concerned.

COURSES OF STUDY

I. The Course Leading to the Degree of Bachelor of Architecture.

This course is designed for the student who expects to become a practicing architect.

II. A Course Leading to the Degree of Bachelor of Architecture and Related Especially to Construction.

This course is designed for the student who plans to engage particularly in the structural field of architectural practice or who wishes to prepare himself for the business of contractor or of manufacturer of building materials.

III. The Course Leading to the Degree of Bachelor of Fine Arts.

This course is designed for the student who expects to become a painter or sculptor.

IV. The Course Leading to the Degree of Bachelor of Landscape Architecture.

This course is designed for the student who expects to become a practicing landscape architect.

SEQUENCE OF COURSES LEADING TO DEGREES

The schedules on the next four pages show the normal sequence of the courses of instruction that lead to the several degrees. In order to become eligible to the degree corresponding to any one of the four courses of study, the student must complete the required work in Hygiene and Military Drill (or Physical Training; see the General Circular of Information) and the courses of instruction that are comprised in that curriculum. Normally any of these courses of study requires five years for completion.

I. *The Course leading to the Degree of* Bachelor of Architecture

Of these four subjects, those which have been presented for entrance need not be taken in the University:

	Trigonometry (Mathematics, 3)		3
	Advanced Algebra (Mathematics, 2)		3
	Physics (Physics, 3 and 4)		6
	Chemistry (Chemistry 101 and 105)		6
FIRST YEAR	Theory of Architecture, 010	1	0
	Elementary Design, 110	3	3
	Elementary Drawing, 310	3	3
	History of Architecture, 410, 411	3	3
	Descriptive Geometry, 510	3	3
	English, 1	3	3
	Hygiene 1–2	1	1
		17	16
SECOND YEAR	Theory of Architecture, 011	0	1
	Architectural Design, 111	4	4
	Life and Antique, 311	3	3
	Elements of Color, 312	2	0
	Modeling, 313	0	2
	History of Architecture, 412	3	0
	Perspective, 511	0	1
	Mathematics, 8	3	3
		15	14
THIRD YEAR	Architectural Design, 112	5	5
	Mechanics of Materials, 210	3	3
	Materials and Construction, 610	5	0
	Working Drawings, 611	0	5
	Heating and Plumbing, 612	0	2
	Elective	3	0
		16	15
FOURTH YEAR	Architectural Design, 113	9	9
	Structural Design, 211, 212	3	2
	Modern Architecture, 413	3	0
	Concrete Construction (C. E. 280)	0	3
	Elective	0	2
		15	16
FIFTH YEAR	Architectural Design, 113	9	0
	Thesis, 114	0	6
	Elective	7	6
		16	12

II. *A Course Leading to the Degree of* Bachelor of Architecture *and Related Especially to* Construction

Of these four subjects those which have been presented for entrance need not be taken in the University:

	Trigonometry (Mathematics, 3)		3
	Advanced Algebra (Mathematics, 2)		3
	Physics (Physics, 3 and 4)		6
	Chemistry (Chemistry, 101 and 105)		6
FIRST YEAR	Theory of Architecture, 010	1	0
	Elementary Design, 110	3	3
	Elementary Drawing, 310	3	3
	History of Architecture, 410, 411	3	3
	Descriptive Geometry, 510	3	3
	English, 1	3	3
	Hygiene, 1–2	1	1
		17	16
SECOND YEAR	Theory of Architecture, 011	0	1
	Architectural Design, 111	4	4
	Life and Antique, 311	3	3
	Elements of Color, 312	2	0
	Modeling, 313	0	2
	History of Architecture, 412	3	0
	Perspective, 511	0	1
	Mathematics, 8	3	3
		15	14
THIRD YEAR	Architectural Design, 112	5	5
	Mechanics of Materials, 210	3	3
	Materials and Construction, 610	5	0
	Working Drawings, 611	0	5
	Materials (C.E. 225)	3	0
	Elective	0	3
		16	16
FOURTH YEAR	Architectural Design, 113	9	0
	Structural Design (C.E. 270–271)	4	3
	Materials Laboratory (C.E. 226)	0	3
	Concrete Construction (C.E. 280)	0	3
	Surveying (C.E. 110)	0	3
	Elective	3	3
		16	15
FIFTH YEAR	Thesis, 114	0	6
	Modern Architecture, 413	3	0
	Steel Buildings (C.E. 273)	3	0
	Reinforced Concrete Design (C.E. 285)	3	0
	Elective	5	7
		14	13

III. *The Course Leading to the Degree of* Bachelor of Fine Arts

Of these two subjects, those which have been presented for entrance need not be taken in the University.

	Physics (Physics, 3 and 4)		6
	Chemistry (Chemistry, 101 and 105)		6
FIRST YEAR	Theory of Architecture, 010	1	0
	Elementary Design, 110	3	3
	Elementary Drawing, 310	3	3
	History of Architecture, 410, 411	3	3
	Descriptive Geometry, 510	3	3
	English, 1	3	3
	Hygiene, 1–2	1	1
		17	16
SECOND YEAR	Theory of Architecture, 011	0	1
	Life and Antique, 311	3	3
	Elements of Color, 312	2	0
	Modeling, 313	0	2
	Water Color, 325	0	2
	History of Architecture, 412	3	0
	Perspective, 511	0	1
	Composition, 334	3	3
	Anatomy	3	3
		14	15
THIRD YEAR	Third Year Drawing or Modeling, 326	4	4
	Still Life in Color, 327	3	0
	Composition, 328	3	3
	Historic Ornament, 470	0	2
	History of Painting and Sculpture, 425	3	3
	Perspective, 512	1	0
	English	0	3
		14	16
FOURTH YEAR	Composition, 329	3	3
	Fourth Year Painting or Modeling, 330	6	6
	Philosophy	3	3
	Elective	3	3
		15	15
FIFTH YEAR	Fifth year Painting or Modeling, 331	6	0
	Composition, 332	3	0
	Thesis, 333	0	8
	Elective	6	6
		15	14

IV. *The Course Leading to the Degree of* Bachelor of Landscape Architecture

Of these four subjects, those which have been presented for entrance need not be taken in the University:

	Trigonometry (Mathematics, 3)		3
	Advanced Algebra (Mathematics, 2)		3
	Physics (Physics, 3 and 4)		6
	Chemistry (Chemistry, 101 and 105)		6
FIRST YEAR	Theory of Architecture, 010	1	0
	Elementary Design, 110	3	3
	Elementary Drawing, 310	3	3
	History of Architecture, 410, 411	3	3
	Descriptive Geometry, 510	3	3
	English, 1	3	3
	Hygiene, 1–2	1	1
		17	16
SECOND YEAR	Theory of Landscape Architecture, 050	1	0
	Design, 111	4	4
	Life and Antique, 311	3	3
	History of Architecture, 412	3	0
	Perspective, 511	0	1
	Woody Plant Materials, 8	0	3
	Mathematics, 8	3	3
		14	14
	SUMMER SESSION (Second Summer)		
	Woody Plant Materials, S 8	3	
	Herbaceous Plant Materials, S 6	2	
THIRD YEAR	Theory; Park Systems, 051	0	1
	Landscape Design, 150	4	4
	Mechanics of Materials, 210	3	3
	History of Landscape Design, 450	3	0
	Planting Design, 650	0	2
	Woody Plant Materials, 8	3	0
	*Surveying (C.E., 110, 211B)	3	2
	Elective	0	3
		16	15
FOURTH YEAR	Landscape Design, 151	8	8
	Elements of Color, 312	2	0
	Planting Design, 651	1	1
	Construction, 225	0	3
	*Earth Work (C.E. 296)	2	0
	Elective	3	4
		16	16
FIFTH YEAR	Landscape Design, 151	8	0
	Thesis, 152	0	6
	Geology, 100	3	0
	Elective	3	3
		14	9

*Second term Surveying and Earth Work are given in alternate years.

COURSES OF INSTRUCTION

GIVEN IN THE COLLEGE OF ARCHITECTURE

THEORY OF ARCHITECTURE

010. **Theory of Architecture.** First term. Credit one hour. Mr. BOSWORTH. Lectures, with sketches and essays by the class. W 2. White 33.

011. **Theory of Architecture.** Second term. Credit one hour. Prerequisite course 010. Mr. BOSWORTH. Lectures, with sketches and essays by the class. W 2. White 33.

012. **Advanced Theory Seminar, Elective.** Throughout the year. Credit one hour each term. Mr. BOSWORTH. Registration limited. Open to seniors and graduates. By appointment.

050. **Theory of Landscape Architecture.** First term. Credit one hour. Mr. DAVIS. Lectures and assigned reading. Th 10. White 33.

051. **Theory: Planning of Parks and Park Systems.** Second term. Credit one hour. Mr. DAVIS. Lectures and assigned reading. W 10. White 33.

070. **Landscape Seminar, Elective.** Second term. Credit one hour. Mr. LAWSON. Open to seniors and graduates. By appointment.

071. **Theory of Architecture.** Elective. First term. Credit one hour. Prerequisite course 112. Mr. SCHUCHARDT. Lectures, with sketches and assigned work. By appointment.

072. **Theory of Architecture.** Elective. Second term. Credit one hour. Prerequisite course 112. Continuation of Course 071. Either term or both may be taken. Mr. SCHUCHARDT. By appointment.

DESIGN

Instruction in Landscape and Architectural Design is given by the Design Staff and consists of individual criticism over the drafting board. By appointment.

110. **Elementary Design.** Throughout the year. Credit three hours a term. Messrs. DUNBAR and TODD. Elementary composition, with drawings in pencil and ink, rendered in wash and color. M W F 2–4:30.

111. **Sophomore Design.** Throughout the year. Credit four hours a term. Messrs. BURNHAM and SEYMOUR. Prerequisite course 110. A series of problems in architectural composition and planning.

112. **Junior Architectural Design.** Throughout the year. Credit five hours a term. Mr. BURNHAM. Prerequisite course 111. A series of problems in architectural composition and studies of detail. One problem each term is identical with that given in course 150.

113. **Senior Architectural Design.** Throughout three terms. Credit nine hours a term. Messrs. BOSWORTH and SEYMOUR. Prerequisite 600 points in course 112. This course is a prerequisite for the thesis.

114. **Architectural Thesis.** Credit six to ten hours. Prerequisite for the thesis, three terms of course 113 except for students in the Construction option who must have one term in course 113.

150. **Junior Landscape Design.** Throughout the year. Credit four hours each term. Mr LAWSON. Prerequisite course 111. A series of problems in landscape composition and studies of detail. One problem each term is identical with that given in course 112.

151. **Senior Landscape Design.** Throughout three terms. Credit eight hours a term. Messrs. MONTILLON and LAWSON. Prerequisite course 150.

152. **Landscape Thesis.** Credit six to ten hours. Prerequisite for beginning the thesis; 900 points in Course 151.

170. **Architectural Rendering.** Second term. Credit three hours. Prerequisite course 112. Mr. BURNHAM.

171. **City Planning.** Second term. Credit one hour. Mr. SCHUCHARDT. Lectures and assigned work. Hours to be announced. Open to a limited number of upperclassmen and graduates only.

THEORY OF CONSTRUCTION

210. **Mechanics of Materials.** Throughout the year. Credit three hours each term. Messrs. YOUNG, BAXTER, and ABBUEHL. First term; a brief study of the principles of analytic and graphic statics. Recitations. Section A, M W F 9. Section B, T Th S 9.

Second Term. The effects of loading in producing stress and deformation in beams, columns and masonry. Two recitations and one computing period. Section A, M W 9; Th 4:30. Section B, T Th 9, Th 2–4.30, White B 10. Text book for the course, Young and Baxter's *Mechanics of Materials*.

211–212. **Structural Design.** First term. Credit three hours. Second term. Credit two hours. Prerequisite course 210. Messrs. YOUNG and BAXTER. The principles studied in Course 210 are applied to the structural design of typical architectural problems. Lectures and reports. First term, M W F 2–4:30; second term, M W 2–4:30. White B 10.

225. **Construction.** (For Students in Landscape Architecture.) This requirement can be met by offering credit in course 211 or in C. E. 280 or 285 as may be approved in individual cases.

270. **Structural Analysis.** First term. Credit two hours. Prerequisite course 212. Mr. YOUNG. Open to a limited number of qualified upperclassmen and graduates. By appointment.

FREEHAND DRAWING AND FINE ARTS WORK

310. **Elementary Drawing.** Throughout the year. Credit three hours a term. Mr. GRIMES. Pencil and charcoal drawing from geometric models and the cast. Sec. A, M W F 10:30–1; Sec. B, T Th S 10:30–1. Franklin Hall.

311. **Life and Antique.** Throughout the year. Credit three hours a term. Mr. BRAUNER. Drawing from the antique and from life. Sec. A, M W F 10:30–1; Sec. B, M W F 2–4:30. Franklin Hall.

312. **Elements of Color.** First term. Credit two hours. Elementary color work from still life. Prerequisite course 310. Mr. WASHBURN. Sec. A, M 10:30–1; W 2–4:30. Sec. B, M 2–4:30; F 10:30–1. Sec. C, W 10:30–1; F 2–4:30. Franklin Hall.

313. **Modeling.** Second term. Credit two hours. Prerequisite course 310. Mr. WASHBURN. Sec. A, M F 10:30–1; Sec. B, Th S 10:30–1. Morse Hall.

325. **Water Color.** Second term. Credit two hours. Mr. MIDJO. Sec. A, Th S 10:30–1. Franklin Hall.

326. **Third Year Drawing or Modeling.** Throughout the year. Credit four hours each term. Messrs. BRAUNER and WASHBURN. Criticism periods, M Th 2–4:30. Franklin Hall.

327. **Still Live in Color.** First term. Credit three hours. Mr. WASHBURN. M W F 10:30–1. Franklin Hall.

328. **Composition.** Throughout the year. Credit three hours each term. Messrs. BOSWORTH and MIDJO. Required of students in Fine Arts and open to restricted election by others. Prerequisite Courses 110, 311 and 312.

A series of problems in decorative composition. Criticism period, F 3. White Hall. Not given in 1928–29.

329. **Composition.** Throughout the year. Credit three hours each term. A continuation of course 328. Criticism period Th 3. White Hall.

330. **Fourth Year Painting or Modeling.** Throughout the year. Credit six hours, each term. Mr. MIDJO. Criticism periods, M W F 10:30–1. Franklin Hall.

331. **Fifth Year Painting or Modeling.** First term. Credit six hours. Messrs. BRAUNER and MIDJO. Criticism periods M W F 2–4:30. Franklin Hall. Not given in 1928–29.

332. **Composition.** First term. Credit three hours. This course is given for the purpose of developing and applying the elementary laws of composition in free and pictorial art. Its principal function is an introduction to the Thesis. Mr. MIDJO. By appointment. Not given in 1928–29.

333. **Thesis.** Credit eight to ten hours. Prerequisite courses 331 and 332.

334. **Composition.** Throughout the year. Credit three hours each term. Mr. BOSWORTH and Mr. DUNBAR. Prerequisite course 110. Elementary decorative composition. Hours and room to be announced.

370. **Graphic Arts.** Throughout the year. Credit two hours, each term. Mr. STONE. Study of illustrative mediums; etching, engraving, lithographing. W F 10:30–1. Franklin Hall. Not given in 1928–29.

HISTORY

410. **History of Architecture.** First term. Credit three hours. Messrs. PHELPS and DUNBAR. Egyptian, Western Asiatic, Greek, Roman, Early Christian, and Byzantine architecture. Lectures with assigned readings, sketches, and examinations. T Th S 9. White 33.

411. **History of Architecture.** Second term. Credit three hours. Prerequisite course 410. Messrs. PHELPS and DUNBAR. Mohammedan, Romanesque, and Gothic architecture. Lectures with assigned readings, sketches, and examinations. T Th S 9. White 33.

412. **History of Architecture.** First term. Credit three hours. Prerequisite course 411. Messrs. PHELPS and DUNBAR. Architecture of the Renaissance and to the beginning of the nineteenth century in the principal European countries. Lectures with assigned readings, sketches, and examinations. M W F 9. White 33.

413. **Modern Architecture.** First term. Credit three hours. Prerequisite course 412 and at least one term of Junior Design. Messrs. PHELPS and DUNBAR. Nineteenth century and more recent work in the principal European countries, and the architecture of the United States from the Colonial times to the present. M W F 10. White 33.

425. **History of Painting and Sculpture.** Throughout the year. Credit three hours a term. Mr. FINLAYSON. A general survey of painting and sculpture. Beginning in 1929 this course will be a prerequisite for all other courses in the history of painting and sculpture. M W F 9. Room to be announced.

426. **History of Northern Painting.** Throughout the year. Credit three hours a term. Mr. FINLAYSON. Painting in the Netherlands and in Germany, first term. Painting in France, second term. Either term may be elected without the other. M W F 3. Room to be announced.

427. **History of Italian Painting and Sculpture.** Throughout the year. Credit two hours a term. Mr. FINLAYSON. Renaissance painting and sculpture with special emphasis on Florence and Venice. T Th 9. Room to be announced.

450. **History of Landscape Design.** First term. Credit three hours. Mr. DAVIS. Lectures, sketches, and assigned reading. M W F 11. White 33.

470. **Historic Ornament.** Second term. Credit two hours. Prerequisite course 412. Mr. PHELPS. Some of the great historic styles of decoration will be analyzed and studied in detail, and the development of furniture, stained glass, and other minor arts will be briefly outlined. Lectures, sketches, and examinations. Given in alternate years. Will be given in 1928–29. Th S 11. White 33.

471, 472. **Historical Seminary.** Throughout the year. Credit one hour a term. Mr. PHELPS. Investigation of assigned topics in the history of architecture: review of books and discussions of current periodical literature. For graduates and open to qualified upperclassmen by permission. By appointment.

GRAPHICS

510. **Descriptive Geometry.** Throughout the year. Credit three hours each term. Messrs. BAXTER and ABBUEHL. The fundamental problems of descriptive geometry are studied and applied to the solution of problems in projection. Lectures and drawing. Text book: Young and Baxter's *Descriptive Geometry.* Sec. A, T Th S 10:30–1; Sec. B, M W F 10:30–1. White B 10.

511. **Perspective.** Second term. Credit one hour. Prerequisite course 510. Mr. MARTIN. A brief study of linear perspective with special reference to direct methods in the use of the perspective plan, proportional measurements, etc. Sec. A, F 2–4:30; Sec. B, W 10:30–1. White 33.

512. **Perspective.** First term. Credit one hour. Prerequisite course 511. Mr. MARTIN. A continuation of course 511 with more advanced study, including reflections, shadows, aerial perspective, sketching in perspective, etc. By appointment.

APPLIED CONSTRUCTION

610. **Building Materials and Construction.** First term. Credit five hours. Prerequisite 4 terms in the College of Architecture or the equivalent. Mr. MARTIN. A brief study of structural materials and details of construction with particular reference to concrete, masonry, fire resisting construction, and carpentry. Daily, except Sat., 8. White 33.

611. **Working Drawings and Specifications.** Second term. Credit five hours. Prerequisite course 610 and 5 terms of Architectural design. Mr. MARTIN. The development of scale and detail working drawings for a typical building, including discussions of specifications, contracts, etc. Lectures, T Th 8. Criticism by appointment. White 33.

612. **Heating, Plumbing, and Lighting.** Second term. Credit two hours. Mr. MARTIN. Lectures and exercises, W F 8. White 33.

650. **Planting Design.** Second term. Credit two hours. Mr. LAWSON. Th 10:30–1. White B. 6.

651. **Planting Design.** Throughout the year. Credit one hour each term. Mr. DAVIS. Th 2–4:30. White B. 6.

670. **Fire Resisting Construction.** Second term. Credit two hours. Mr. MARTIN. Lectures and assigned reading. Given in alternate years. Not given in 1928–29. Th S 10.

COURSES OF THE REGULAR CURRICULA GIVEN OUTSIDE THE COLLEGE OF ARCHITECTURE

MILITARY SCIENCE AND TACTICS, AND PHYSICAL TRAINING

All men in the first two years of undergraduate courses must, in addition to the scholastic requirements for the degree, take three hours a week in the Department of Military Science and Tactics. This department is a unit of the Reserve Officers' Training Corps of the United States Army. The students are organized in an infantry regiment of twelve regular companies, a battalion of field artillery of three batteries, one headquarters company, one machine gun company, and a band.

For details of the work in the Department of Military Science and Tactics, see the General Circular of Information.

All women in the first two years of undergraduate courses, and all men of those two classes who are excused from the military drill, must, in addition to the scholastic requirements for the degree, take three hours a week in the Department of Physical Training.

For details of the work in the Department of Physical Training, see the General Circular of Information.

HYGIENE AND PREVENTIVE MEDICINE

All students in the first year of undergraduate courses are required to attend lectures on Hygiene and Preventive Medicine given once a week throughout the college year. See Announcement of Courses page 20.

COURSES GIVEN IN THE COLLEGE OF ARTS AND SCIENCES

MATHEMATICS

2. **Advanced Algebra.** Repeated in second term. Credit three hours.

3. **Plane Trigonometry.** Repeated in second term. Credit three hours.

8. **Analytic Geometry and Calculus.** Throughout the year. Credit three hours a term. Prerequisite, Mathematics, 1, 2, 3, or the equivalent. Primarily for students in the College of Architecture.

ENGLISH

1. **Elementary Composition and Literature.** Throughout the year. Credit three hours a term. Messrs. JOHNSON, ELSON, AINSWORTH, BISSELL, BUCHANAN, and WALZ.

This course is designed for underclassmen in Agriculture, Architecture, and Chemistry who have satisfied the entrance requirements in English. A study of composition in connection with the reading of representative works in English literature. Students who have not taken the course in the first term may enter in the second term in sections provided for them.

Registration in the course is in charge of Mr. BALDWIN. Students who elect English I must apply at Roberts 292 on Monday, Tuesday or Wednesday of registration week for assignment of sections.

PHILOSOPHY

4. **The Fine Arts; their Philosophy and History in Outline.** First term. Credit three hours. Professor HAMMOND. An elementary course on aesthetics. Lectures, assigned readings, and examinations.

PHYSICS

3. **Introductory Experimental Physics.** First term. Credit three hours. Lectures, Assistant Professor HOWE. Laboratory, Messrs. BARNES, CARR, GOLDSMITH, HIRCH, MARCHANT, MORELL, NELSON, TEEPLE, THEN, and WHITE. One two-hour period a week, to be arranged.

Demonstration lectures and laboratory work covering properties of matter, sound and light.

Courses 3 and 4 form a continuous first course. Course 4 may be taken before course 3 if this sequence is preferred.

4. **Introductory Experimental Physics.** Second term. Credit three hours. Lectures, Assistant Professor HOWE. Laboratory, Messrs. BARNES, CARR, GOLDSMITH, HIRCH, MARCHANT, MORELL, NELSON, TEEPLE, THEN, and WHITE. One two-hour period a week to be arranged.

Demonstration lectures and laboratory work covering heat, magnetism, and electricity.

Chemistry

101. **Introductory Inorganic Chemistry.** Lectures. Repeated in the second term. Credit three hours. Professor Browne and Assistant Professor McKinney. Examinations for those who were unavoidably absent from the final examination in courses 101 and 105 will be held at 2 p.m. on the day before instruction begins in the fall.

105. **Introductory Inorganic Chemistry.** Recitations and laboratory practice. Repeated in the second term. Credit three hours. Recitations, one hour a week, to be arranged. Professor Browne, Assistant Professor McKinney, and assistants.

Chemistry 101 and 105 must be taken simultaneously unless permission is obtained by the student from the Dean of his college and from the Department of Chemistry to take either course alone.

Geology

100. **Introductory Geology.** Repeated in the second term. Credit three hours. Professor Ries, Miss St. John, Mr. Burfoot, and Mr. Megathlin. Lectures and laboratory.

Students must register for laboratory assignment at Geological Laboratory, McGraw, before the beginning of the course. The fundamental principles of this branch of science. The inorganic aspects of the subject are emphasized more than the organic.

COURSE GIVEN IN THE MEDICAL COLLEGE

24. **Anatomy.** Throughout the year. Credit three hours a term. Professor Kerr. A study in anatomy for the artist. Lectures and drawing periods. Not given in 1928–29.

COURSES GIVEN IN THE COLLEGE OF AGRICULTURE

1. **General Botany.** First and second terms. Credit three hours a term; both terms of the course must be completed to obtain credit. Lectures and laboratories. This course is designed to furnish a general knowledge of the fundamental facts and principles of plant life. Laboratory fee, $3.50 a term.

Six Weeks Summer Session

S 6. **Garden Flowers.** Credit two hours. Lectures and laboratories. Miss Minns. Laboratory fee, $2.00.

S 8. **Woody Plant Materials for Landscape Planting.** Credit three hours. Lectures and laboratories. Professor Curtis and Assistant Professor Porter. Laboratory fee, $2.00.

COURSES GIVEN IN THE COLLEGE OF ENGINEERING

110. **Elementary Surveying.** Freshmen. Either term as assigned. Credit three hours. Use of steel tape, level and transit; fundamental surveying methods; measurement of lines, angles and differences of elevation; land surveying, areas and plotting. Recitations, field work, computations, and mapping. Textbook: Breed and Hosmer's *Elementary Surveying*. First term, one recitation and two field or computation periods a week; Second term, three recitations a week for the first six weeks and three field or computation periods a week for the remainder of the term, Professor Underwood, Assistant Professor Lawrence, and others.

211. B. **Advanced Surveying.** For students in Landscape Architecture. Second term. Credit two hours. Prerequisite course 110. Topographic surveying, precise measurements; transit stadia and plane table; topographic reconnaissance; road location; circular curves; triangulation for the control of local surveys;

base lines. Recitations and field work. Textbook: Breed and Hosmer's *Higher Surveying*. Professor UNDERWOOD and Assistant Professor LAWRENCE.

225. **Materials of Construction.** Juniors. Credit three hours. The materials studied are: Lime, cement, stone, brick, sand, timber, ores, cast iron, wrought iron, steel, and some of the minor metals and alloys. The chemical and physical properties, uses, methods of manufacture, methods of testing, and unit stresses of each material are considered, particular emphasis being laid on the points of importance to engineers. Three recitations a week. Textbook: Mills's *Materials of Construction*. Professor SCOFIELD.

226. **Materials Laboratory.** Juniors. Either term. Credit three hours. Prerequisite course 210 and must be taken with or preceded by 280. Experimental determination of the properties of materials by mechanical tests. Study of testing machines (their theory, construction, and manipulation); calibration of testing machines and apparatus; commercial tests of iron and steel: tensile, compressive, torsional, shearing, and flexure tests of metal and various woods and stress-strain observations; tests of cement, concrete aggregate, concrete, plain and reinforced, and of road material and paving brick. The course is planned to supplement Course 225 with its study of the properties of materials by the actual handling of the materials and by observations of their behavior under stress. Laboratory work five hours a week. Professor SCOFIELD and Mr. KOERNER.

270. **Structural Design and Bridge Stresses.** Juniors. First term. Credit four hours. Prerequisite course 210.

Structural Design. The recitations cover the graphic analysis of simple beams and roof trusses. The computations and drawings include complete detail designs and working drawings of wooden joints to resist large tensile stresses, and of a wooden roof truss for given specifications. The object of the course is to show how to apply the principles of mechanics to the design of every detail of the simple structures named, and to study the forms and strength of joints and fastenings used in heavy timber framing. The computations required are to be arranged in systematic order in the form of reports. Textbook: Jacoby's *Structural Details*. Computation and drawing, two-and-one-half hours a week.

Bridge Stresses. Stresses due to dead, live and wind loads, initial tension, and impact; panel loads and locomotive axle loads; determination of the position of live loading for greatest stresses; maximum and minimum stresses; analytic and graphic methods are used. The principal types of simple trusses employed in modern construction are considered, in several cases both with and without counterbracing; historical notes on truss bridges. The solution of many numerical examples taken from practice forms a prominent part of the class work. Three recitations a week. Professor URQUHART, Assistant Professors BURROWS and O'ROURKE, and Mr. OSGOOD.

271. **Structural Design.** Juniors. Second term. Credit three hours. Prerequisite course 270. An elementary course in Steel Design. Complete design, detail drawing, bill of material and estimate of weight of a steel roof truss and of a through and deck railroad plate girder bridge. Textbook: Johnson, Bryan and Turneaure's *Modern Framed Structures*, Part III. Three computation and drawing periods a week. Professor URQUHART, Assistant Professors BURROWS and O'ROURKE, and Mr. OSGOOD.

273. **Steel Buildings.** Elective. Seniors and graduates. First term. Credit three hours. Prerequisite courses 210, 271. This course comprises the design of the steel framework for building of the prevailing type used in power house or shop construction. Dead, snow, and wind stress diagrams are drawn for the roof trusses. Provision is made for an electric crane moving the full length of the building and the stresses in the framework due to the movement of the crane are determined. The effect of the wind and the eccentric load due to the crane girder are considered in the design of the columns. Textbook: Ketcham's *Steel Mill Buildings*. Report and drawings. Three two-hour periods a week. Assistant Professor BURROWS.

280. **Concrete Construction.** Juniors. Either term. Credit three hours. Prerequisite courses 210, 225, and 226. Concrete materials, properties of plain concrete, its making and deposition; elementary theory of reinforced concrete as applied to columns, rectangular beams and slabs; T-beams and beams reinforced for compression; direct stress combined with flexure. Three two-hour periods a week. Textbook: Urquhart and O'Rourke's *Design of Concrete Structures.* Professor URQUHART, Assistant Professor O'ROURKE, and Mr. KOERNER.

282. **Reinforced Concrete Building Design.** Elective. Seniors and graduates. Either term. Credit three hours. Prerequisite course 280. Design of a reinforced concrete flat-slab building and investigation of various other types of floor systems for commercial buildings. Complete detail design for one building, including stairway, elevator shafts, penthouses, etc. Working drawings and steel schedules. Seven and one-half hours a week. Textbook: Urquhart and O'Rourke's *Design af Concrete Structures.* Professor URQUHART and Assistant Professor O'ROURKE.

285. **Reinforced Concrete Design.** Elective. Seniors and graduates. Either term. Credit three hours. Prerequisite course 280. Theory and design of gravity, cantilever, and counterfort retaining walls. Design of footings: single and multiple column of reinforced concrete, I-beam grillages. Design of bins and tanks: subsurface and supported on towers. Reports and sketches. Three two-hour periods a week. Professor URQUHART and Assistant Professor O'ROURKE.

HYGIENE AND PREVENTIVE MEDICINE

1. **Hygiene.** First term. Required of all Freshmen. One lecture recitation each week with preliminary examination and final. The use of a textbook will be required.

Registration and assignment to section: Men, Old Armory; Women, Sage Gymnasium.

Sections for men: Monday 9, 10, 11, 12; Tuesday 9, 11, 12; Wednesday 8, 9, 10, 11, 12; Thursday 8, 9, 11, 12; Friday 8, 11; Saturday 8, 9, 10, 12.

Sections for women: Monday 8; Tuesday 8, 10; Thursday 10, 2; Friday 9, 2; Saturday 11.

2. **Hygiene.** Second term. Required of all Freshmen. One lecture recitation each week with preliminary examination and final. The use of a textbook will be required.

Registration and assignment to section: Men, Old Armory; Women, Sage Gymnasium.

Sections for men: Monday 9, 11, 12; Tuesday 9, 11, 12; Wednesday 8, 9, 11, 12; Thursday 9, 11, 12; Friday 8, 11; Saturday 8, 9, 10, 12.

Sections for women: Monday 8; Tuesday 8, 10; Thursday 10, 2; Friday 9, 2; Saturday 11.

3. **Health Supervision of School Children.** Second term. Credit two hours. Assistant Professor GOULD. T Th 12. Anatomy lecture room, Stimson. Registration at Hygiene Office, Old Armory.

A practical course of lectures and demonstrations designed to familiarize the student with the facts and methods necessary for making an effective health supervision of school children. Prerequisites suggested but not demanded: Human Physiology and Anatomy. Open to sophomores, juniors and seniors.

4. **First Aid.** First term. (Also repeated in second term.) Credit one hour. Dr. SHOWACRE. First term, section 1, T 12, Anatomy lecture room, Stimson; section 2, F 8, Goldwin Smith 236. Second term, section 1, W 8, Anatomy Lecture room, Stimson; section 2, S 8, Anatomy lecture room, Stimson. Registration at Hygiene Office, Old Armory. Prerequisites: Hygiene 1 and 2.

This course will include a discussion and practical demonstration of the main methods at hand for preventing accidents and for giving emergency treatment.

5. **Industrial Hygiene.** First term. Credit one hour. Assistant Professor GOULD. Th 12. Anatomy lecture room, Stimson. Registration at Hygiene Office, Old Armory. Prerequisite, Hygiene 1 and 2.

Factory sanitation, ventilation and illumination; occupational poisoning and disease; factory legislation; accident prevention; fatigue in industry; preventive medicine in the industries.

6. **School Hygiene.** First term. Credit two hours. Professor YOUNG. T Th 12. Goldwin Smith 242. For juniors and seniors. Sanitary aspects of school environment; methods and scope of health instruction. Registration at Hygiene Office, Old Armory. See Physical Education 24.

7. **Rural and Camp Hygiene.** Second term. Credit one hour. Assistant Professor SMILEY. W 12. Anatomy Lecture room, Stimson. Registration at Hygiene office, Old Armory. Prerequisites, Hygiene 1 and 2.

Effective methods for safeguarding health in rural communities and in camp.

8. **Mental Hygiene.** First term. Credit one hour. Dr. ALVA GWIN. T 2 p.m. Histology lecture room, Stimson. Registration at Hygiene Office, Old Armory. Prerequisites, Hygiene 1 and 2.

To acquaint the student with the more common mental and emotional mechanisms which underlie conduct and attitude with the hope that the insight thus gained may be useful to the individual in the solution of his own behavior and adjustment problems. Little if any discussion of pathological types will be attempted.

ELECTIVE COURSES

The elective hours required in any of the regular courses leading to a degree may be taken either within or without the College of Architecture, subject only to the approval of the professor in charge of such course and of the Dean of the College of Architecture.